

★OMRO

S02

99-065872/06

★JP 10311767-A

Physical quantity sensor e.g. piezo resistance type semiconductor pressure sensor - involving applying of current to distorted shape-memory alloy control layer to heat and bring it to original position

OMRON KK 97.05.13 97JP-137492

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The sensor (10) has a piezo resistor (12) formed on a diaphragm (11b) of a silicon substrate (11). A shape-memory alloy control layer (14) is adhered on the diaphragm. The diaphragm is displaced with the application of the pressure. The resistance value of piezo resistor is varied based on the displacement. A resistance detector (21) detects the changes in the resistance value.

A current generator (23) produces current based on the output of the resistance detector. The generator current is applied to the control layer to heat and bring it to the original position, when the pressure is not applied. The diaphragm is also brought to original position along with the control layer, when the pressure is not applied.

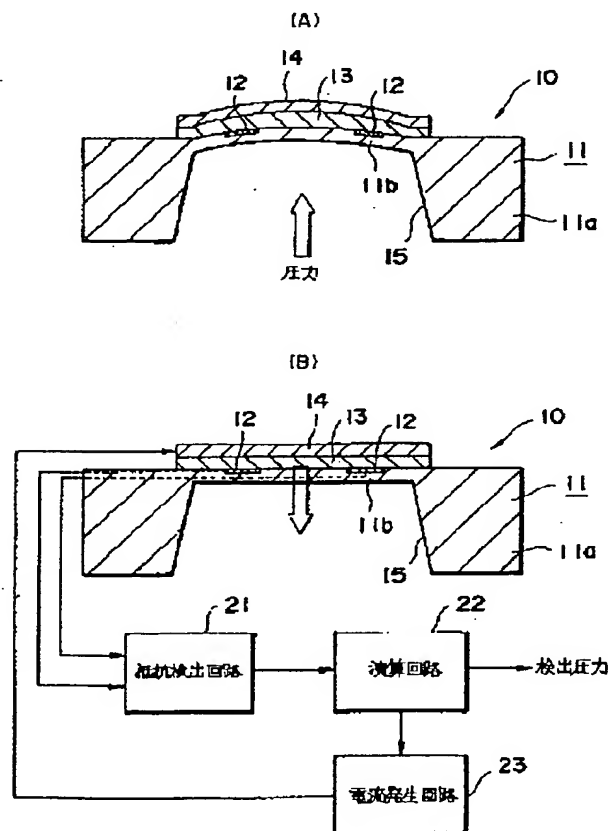
USE - E.g. electrostatic capacitance type acceleration sensor.

ADVANTAGE - Obtains high-speed response. Measures external force. (8pp

Dwg.No.2/9)

N99-049144

S02-F04B S02-F04B1 S02-F04B2



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